UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,492	01/23/2004	Gunnar Paul Seaburg	200314673-1	7005

22879 7590 10/03/2006

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER	
LOHN, JOSHUA A	

ART UNIT	PAPER NUMBER
2114	

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/763,492	SEABURG ET AL.	
	Examiner	Art Unit	
	Joshua A. Lohn	2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 6, 7, 16-18, 20, 25-28, 30, 38-44, 46, and 47 are rejected under 35 U.S.C. 102(e) as being anticipated by Jenevein et al., United States Patent number 6,615,365, filed March 22, 2000.

As per claim 1, Jenevein discloses a computerized cluster-based backup method, comprising: selecting a source partition on a hard disk drive (Jenevein, col. 17, lines 13-15, where the selection of the user data indicates the partition being selected as source), where a cluster-based backup image of the source partition will be produced and stored in a target partition on the hard disk drive (Jenevein, col. 17, lines 31-35, where the target partition is the partition where the image is stored); obtaining a boot record for the source partition; examining the boot record to determine a value for one or more file system parameters for a file system stored in the source partition (Jenevein, col. 8, lines 1-8, and col. 10, lines 11-14, where system data is gathered from the boot record); calculating one or more values for one or more source partition metadata parameters from the one or more file system parameters and one or more source partition parameters (Jenevein, col. 10, lines 25-50, where the various image characteristics are calculated based upon system parameters and partition parameters); writing a

cluster-based backup image header data structure to the target partition, where the cluster-based backup image header data structure includes one or more of, the source partition metadata parameters, the file system parameters, and the source partition parameters (Jenevein, col. 10, lines 25-50, where the TOC signature acts as a cluster-based backup image header data structure); selectively manipulating one or more bits in a volume bitmap associated with the source partition, where the bits are associated with one or more files that are not to be included in the cluster-based backup image (Jenevein, col. 20, line 60 through col. 21, line 6); identifying, by accessing the volume bitmap, one or more clusters in the source partition to be included in the cluster-based backup image (Jenevein, col. 21, lines 1-6); and for the one or more clusters (Jenevein, col. 6, lines 51-54, where each cluster is handled by known techniques): reading a cluster from the source partition; and writing the cluster to the cluster-based backup image (Jenevein, col. 3, lines 51-58, where know techniques of reading and writing are used).

As per claim 3, Jenevein discloses the method of claim 1, where the target partition is in the source partition (Jenevein, col. 5, lines 5-8).

As per claim 6, Jenevein discloses the method of claim 1, where the file system parameters include one or more of, a file system type, a file system size, and a cluster size (Jenevein, col. 8, lines 9-18, and col. 10, lines 40-45).

As per claim 7, Jenevein discloses the method of claim 1, where the cluster-based backup image header data structure includes one or more of, a header length field, a format version field, an original file name field, a partition cluster count field, a backup image cluster count field, a

volume bitmap bit count field, a cluster size field, a sector size field, and a partition type field (Jenevein, col. 10, lines 25-36).

As per claim 16, Jenevein discloses a computerized method for producing a cluster-based backup image of a source partition on a hard disk drive, comprising: retrieving one or more source partition parameters from a boot data structure associated with the source partition (Jenevein, col. 8, lines 1-8); accessing a volume bitmap associated with the source partition to facilitate identifying one or more clusters to be included in the cluster-based backup image (Jenevein, col. 20, line 60 through col. 21, line 6); and producing the cluster-based backup image by: writing to a target partition a cluster-based backup image metadata data structure configured to store partition metadata (Jenevein, col. 10, lines 25-50); and for one or more clusters in the source partition: selectively reading a cluster (Jenevein, col. 3, lines 51-58) based, at least in part, on information stored in the volume bitmap (Jenevein, col. 20, line 60 through col. 21, line 6); writing the cluster to the target partition (Jenevein, col. 3, lines 51-58); and linking the cluster written to the target partition to the cluster-based backup image metadata data structure to facilitate restoring the source partition from the target partition (Jenevein, col. 10, lines 35-53, where the image data is linked to the metadata data structure).

As per claim 17, Jenevein discloses the method of claim 16, where the source partition parameters include one or more of, a file system type, a file system size, and a cluster size (Jenevein, col. 8, lines 9-18, and col. 10, lines 40-45).

As per claim 18, Jenevein discloses the method of claim 16, where the boot data structure comprises a boot record (Jenevein, col. 8, lines 1-8).

As per claim 20, Jenevein discloses the method of claim 16, where the target partition is in the source partition (Jenevein, col. 5, lines 5-8).

As per claim 25, Jenevein discloses a computerized partition restoration method, comprising: identifying a partition to restore on a hard disk drive (Jenevein, col. 16, lines 34-36); locating one or more cluster-based backup images from which the partition can be restored, where the one or more cluster-based backup images are located on the hard disk drive (Jenevein, col. 14, lines 38-39); selecting a cluster-based backup image from which the partition will be restored (Jenevein, col. 14, lines 38-39); reading a cluster-based backup image header data structure from the cluster-based backup image to obtain one or more of, a partition parameter, and a file system parameter (Jenevein, col. 21, lines 48-67); writing one or more partition parameters to a boot record associated with the partition (Jenevein, col. 21, lines 60-65); writing one or more file system parameters to the boot record associated with the partition (Jenevein, col. 21, lines 60-65); resetting one or more bits of a volume bitmap associated with the partition (Jenevein, col. 21, lines 2-6, where any changes in storage during the restoration are reflected by setting and resetting of volume bitmap bits); and for one or more clusters in the cluster-based backup image: reading a cluster from the cluster-based backup image; writing the cluster to the partition (Jenevein, col. 22, lines 16-21); and updating the volume bitmap to include the written cluster in a set of active clusters in the partition (Jenevein, col. 21, lines 2-6).

As per claim 26, Jenevein discloses the method of claim 25, where the cluster-based backup image is located in the same partition as the partition to restore (Jenevein, col. 5, lines 5-8).

As per claim 27, Jenevein discloses the method of claim 25, where the cluster-based backup image is located in a different partition than the partition to restore (Jenevein, col. 16, lines 40-43).

As per claim 28, Jenevein discloses the method of claim 25, where the file system parameters include one or more of, a file system type, a file system size, and a cluster size (Jenevein, col. 21, lines 60-65).

As per claim 30, Jenevein discloses the method of claim 25, where the partition to be restored includes one or more of, an NTFS file system, and a FAT32 file system (Jenevein, col. 7, lines 45-59).

As per claim 38, Jenevein discloses a system, comprising: a metadata logic configured to acquire a partition metadata that describes a hard disk drive partition to be backed up (Jenevein, col. 8, lines 1-8 and col. 10, lines 8-14), and to write the partition metadata to a cluster-based backup image on the hard disk drive from which the hard disk drive partition can be restored (Jenevein, col. 10, lines 11-14 and col. 10, lines 25-46); and a data logic configured to access a volume bitmap associated with the hard disk drive partition to be backed up, to selectively read a cluster identified in the volume bitmap as being allocated to the hard disk drive partition to be

backed up, and to write the cluster to the cluster-based backup image (Jenevein, col. 20, line 60 through col. 21, line 6, where the bitmap is accessed as part of the selection, and col. 3, lines 51-58, where the reading and writing takes place).

As per claim 39, Jenevein further discloses that the metadata logic is further configured to acquire a partition metadata from a cluster-based backup image where the partition metadata describes a hard disk drive partition to be restored (Jenevein, col. 21, lines 48-67), and to write the partition metadata to a data structure on the hard disk drive to which the hard disk drive partition will be restored (Jenevein, col. 21, lines 60-65); and where the data logic is further configured to access a volume bitmap data associated with the hard disk drive partition to be restored from the cluster-based backup image (Jenevein, col. 20, lines 60-67, where the bitmap is used to control access by indicating in-use data areas), to selectively read a cluster from the cluster-based backup image (Jenevein, col. 22, lines 16-21), to write the cluster to the partition to be restored (Jenevein, col. 22, lines 16-21), and to update the volume bitmap to associate the written cluster with the partition to be restored (Jenevein, col. 20, lines 60 through col. 21, line 6, where the bitmap is an up to date representation of cluster states).

As per claim 40, Jenevein further discloses the system of claim 39, where the cluster-based backup image is located in the same partition as the hard disk drive partition to be backed up (Jenevein, col. 5, lines 5-8).

As per claim 41, Jenevein further discloses the system of claim 39, where the cluster-based backup image is located in a different partition than the hard disk drive partition to be backed up (Jenevein, col. 16, lines 40-43).

As per claim 42, Jenevein further discloses the system of claim 39, where the partition metadata is acquired from a boot record associated with the hard disk drive partition to be backed up (Jenevein, col. 8, lines 1-8).

As per claim 43, Jenevein discloses a system, comprising: means for identifying a partition on a hard disk drive for which a cluster-based backup image is to be written onto the hard disk drive (Jenevein, col. 17, lines 13-15); means for acquiring and writing to the cluster-based backup image a partition metadata that describes the partition on the hard disk drive (Jenevein, col. 8, lines 1-8, col. 10, lines 11-14, and col. 10, lines 25-50); and means for acquiring and writing to the cluster-based backup image a partition data comprising one or more used clusters in the partition on the hard disk drive (Jenevein, col. 20, line 60 through col. 21, line 6, and col. 3, lines 51-58).

As per claim 44, Jenevein discloses a system, comprising: means for identifying a cluster-based backup image on a hard disk drive from which a partition on the hard disk drive can be restored (Jenevein, col. 16, lines 34-36); means for acquiring and writing a cluster-based backup image partition metadata to the partition to be restored (Jenevein, col. 21, lines 48-65); and means for acquiring and writing to the partition to be restored a partition data comprising one or more clusters stored in cluster-based backup image (Jenevein, col. 22, lines 16-21).

As per claim 46, Jenevein discloses a computer-readable medium having stored thereon a data structure comprising: a first field containing data representing a cluster-based image from

which a partition on a hard disk drive can be restored (Jenevein, col. 10, lines 46-49); and a second field containing metadata describing the cluster-based image stored in the first field (Jenevein, col. 10, lines 25-45).

As per claim 47, Jenevein discloses a set of application programming interfaces embodied on a computer-readable medium for execution by a computer component in conjunction with performing one or more of, a cluster-based image backup, and a cluster-based image restore, comprising: a first interface for identifying a partition on a hard disk drive for which a cluster-based backup image is to be produced and a target partition on the hard disk drive in which the cluster-based backup image is to be written (Jenevein, col. 17, lines 13-15); and a second interface for identifying a cluster-based backup image on the hard disk drive from which a partition on the hard disk drive can be restored (Jenevein, col. 14, lines 38-39) and a target partition on the hard disk drive to be restored (Jenevein, col. 16, lines 34-36).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Jenevein in view of CNET

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jenevein in view of CNET.com user review of Power Quest Drive, published September 2, 2002, hereinafter CNET.

As per claim 2, Jenevein discloses all the dependencies of the methods of claim 1, but fails to disclose that the cluster-based backup image is created at a rate of more than five hundred megabytes per minute.

CNET discloses creating a cluster-based image at a rate of more than five hundred megabytes per minute (CNET, User Opinions section, where ten gigabytes were imaged in 8 minutes).

It would have been obvious to one skilled in the art at the time of the invention to use the speed of the PowerQuest Drive image disclosed by CNET in the invention of Jenevein.

This would have been obvious because Jenevein discloses using PowerQuest Drive image formats (Jenevein, col. 14, lines 3-4), and CNET discloses that this format provides beneficial speed attributes.

Jenevein in view of Recovery Solutions

Claims 4, 9-15, 19, 21-24, 29, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenevein in view of Hard Disk-based Recovery Solutions, version 2.01, published March 19, 2003, hereinafter Recovery Solutions.

As per claim 4, Jenevein discloses all the dependencies of the methods of claim 1, but fails to disclose where the target partition is not in the source partition.

Recovery Solutions discloses where the target partition is not in the source partition (Recovery Solutions, page 6, Note section).

It would have been obvious to one skilled in the art at the time of the invention to include the ability to have a separate partition in the invention of Jenevein.

This would have been obvious because Jenevein discloses a desire to avoid image corruption (Jenevein, col. 15, lines 35-37), and Recovery Solutions discloses that having a separate target partition from the source partition is beneficial to avoid corruption (Recovery Solutions, page 6, Note section).

As per claims 9-14, Jenevein discloses all the steps and dependencies of the methods of claim 1. However, Jenevein does not disclose executing these methods each with a WinPE process, as disclosed by claims 9-14.

Recovery Solutions discloses using WinPE processes to execute all steps in the creation of recovery images (Recovery Solutions, pages 5 and 7).

It would have been obvious to one skilled in the art at the time of the invention to use the WinPE processes of Recovery Solutions to execute the image creation methods of Jenevein.

This would have been obvious because, both Jenevein and Recovery Solutions disclose a desire to create a recovery image of a partition (Recovery Solutions, page 1, and Jenevein, col. 6, lines 44-46). Recovery Solutions provides a WinPE method for doing so that provide the added benefits of being faster and using more recent drivers (Recovery Solutions, page 4) than may be available with the MS-DOS deferring system of Jenevein (Jenevein, col. 7, lines 30-41).

As per claim 15, this claim is merely a combination of claims 1 and 9-14, and as such is rejected under Jenevein in view of Recovery Solutions based on the teachings disclosed in the above rejections of claims 1 and 9-14. Further, Jenevein discloses the computer readable medium of claim 15 (Jenevein, col. 23, line 22).

As per claims 19, 22, and 23, Jenevein discloses all the steps and dependencies of the methods of claim 16. However, Jenevein does not disclose executing these methods each with a WinPE process, as disclosed by claim 19, 22, and 23.

Recovery Solutions discloses using WinPE processes to execute all steps in the creation of recovery images (Recovery Solutions, pages 5 and 7).

It would have been obvious to one skilled in the art at the time of the invention to use the WinPE processes of Recovery Solutions to execute the image creation methods of Jenevein.

This would have been obvious because, both Jenevein and Recovery Solutions disclose a desire to create a recovery image of a partition (Recovery Solutions, page 1, and Jenevein, col. 6, lines 44-46). Recovery Solutions provides a WinPE method for doing so that provide the added benefits of being faster and using more recent drivers (Recovery Solutions, page 4) than may be available with the MS-DOS deferring system of Jenevein (Jenevein, col. 7, lines 30-41).

As per claim 21, Jenevein discloses all the dependencies of the methods of claim 16, but fails to disclose where the target partition is not in the source partition.

Recovery Solutions discloses where the target partition is not in the source partition (Recovery Solutions, page 6, Note section).

It would have been obvious to one skilled in the art at the time of the invention to include the ability to have a separate partition in the invention of Jenevein.

This would have been obvious because Jenevein discloses a desire to avoid image corruption (Jenevein, col. 15, lines 35-37), and Recovery Solutions discloses that having a separate target partition from the source partition is beneficial to avoid corruption (Recovery Solutions, page 6, Note section).

As per claim 24, Jenevein discloses a computer-readable medium storing processor executable instructions operable to perform a method for producing a cluster-based backup image of a source partition on a hard disk drive, the method comprising: retrieving one or more of, a file system type, a file system size, and a cluster size associated with a file system stored on the source partition from a boot record associated with the source partition (Jenevein, col. 8, lines 1-11, and col. 10, lines 40-45); accessing a volume bitmap associated with the source partition to facilitate identifying one or more clusters to be included in the cluster-based backup image (Jenevein, col. 20, line 60 through col. 21, line 6); and producing the cluster-based backup image by: writing to a target partition, a cluster-based backup image metadata data structure configured to store partition metadata (Jenevein, col. 10, lines 25-50); and for one or more clusters in the source partition: selectively reading, in order, a cluster (Jenevein, col. 3, lines 51-58) based, at least in part, on information stored in the volume bitmap (Jenevein, col. 20, line 60 through col. 21, lien 6); writing, in order, the cluster to the target partition (Jenevein, col. 3, lines 51-58); and linking the cluster written to the target partition to the cluster-based backup image metadata data

structure to facilitate restoring the source partition from the target partition (Jenevein, col. 10, lines 35-53).

Jenevein fails to disclose the accessing, reading, and writing being done by a WinPE process.

Recovery Solutions discloses using WinPE processes to execute all steps in the creation of recovery images (Recovery Solutions, pages 5 and 7).

It would have been obvious to one skilled in the art at the time of the invention to use the WinPE processes of Recovery Solutions to execute the image creation methods of Jenevein.

This would have been obvious because, both Jenevein and Recovery Solutions disclose a desire to create a recovery image of a partition (Recovery Solutions, page 1, and Jenevein, col. 6, lines 44-46). Recovery Solutions provides a WinPE method for doing so that provide the added benefits of being faster and using more recent drivers (Recovery Solutions, page 4) than may be available with the MS-DOS deferring system of Jenevein (Jenevein, col. 7, lines 30-41).

As per claim 29, Jenevein discloses the reading, writing, and resetting of claim 25. However, Jenevein does not disclose executing any of these methods with a WinPE process, as disclosed by claim 29.

Recovery Solutions discloses using WinPE processes to execute all steps in the creation of recovery images (Recovery Solutions, pages 5 and 7).

It would have been obvious to one skilled in the art at the time of the invention to use the WinPE processes of Recovery Solutions to execute the image creation methods of Jenevein.

This would have been obvious because, both Jenevein and Recovery Solutions disclose a desire to create a recovery image of a partition (Recovery Solutions, page 1, and Jenevein, col. 6, lines 44-46). Recovery Solutions provides a WinPE method for doing so that provide the added benefits of being faster and using more recent drivers (Recovery Solutions, page 4) than may be available with the MS-DOS deferring system of Jenevein (Jenevein, col. 7, lines 30-41).

As per claim 31, this claim is merely a combination of claims 25-30, and as such is rejected under Jenevein in view of Recovery Solutions based on the teachings disclosed in the above rejections of claims 25-30. Further, Jenevein discloses the computer readable medium of claim 31 (Jenevein, col. 23, line 22).

Jenevein in view of Computer Dictionary

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jenevein in view of the Microsoft Computer Dictionary, Fifth Edition, published 2002, hereinafter Computer Dictionary.

As per claim 5, Jenevein disclose all the dependencies of the methods of claim 1, Jenevein discloses reading the boot record (Jenevein, col. 8, lines 1-8), but fails to disclose where the boot record is obtained by reading the first sector from the source partition.

Computer Dictionary discloses that the boot record is the first sector of the hard disk (Computer Dictionary, page 329).

It would have been obvious to one skilled in the art at the time of the invention to include the reading of the first sector, as disclosed by Computer Dictionary in the invention of Jenevein.

This would have been obvious because Jenevein disclose reading the boot record (Jenevein, col. 8, lines 1-8), without explicitly disclosing where the boot record is located. Computer Dictionary provides the location that is lacking (Computer Dictionary, page 329)

Jenevein in view of Norton Ghost

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jenevein in view of the Norton Ghost User's Guide, copyrighted 2002, hereinafter Norton Ghost.

As per claim 8, Jenevein discloses all the dependencies of the methods of claim 1. Jenevein further discloses providing file exceptions in the image generation (Jenevein, col. 20, line 60 through col. 21, line 6). However, Jenevein fails to disclose where the files that are not to be included in the cluster-based backup image include one or more of, a hiberfil.sys file, a pagefile.sys file and a ghost file.

Norton Ghost discloses omitting a hiberfil.sys file, a pagefile.sys file, and a ghost file (Norton Ghost, page 69).

It would have been obvious to one skilled in the art at the time of the invention to include the file omissions of Norton Ghost in the invention of Jenevein.

This would have been obvious because Jenevein discloses a desire to not image the image itself (Jenevein, col. 20, line 60 through col. 21, line 6), which is a ghost file, such as that disclosed by Norton Ghost. Further, Norton Ghost discloses that the excluded files are only valid for each Windows session, and note necessary to provide a reliable backup (Norton Ghost, page 69). The omission of the will obviously benefit Jenevein by decreasing the size of the image file.

Jenevein in view of Colligan

Claims 32 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenevein in view of Colligan et al., United States Patent number 6,519,762, filed December 15, 1998.

As per claim 32, Jenevein discloses a computerized method for restoring a partition on a hard disk drive from a cluster-based backup image stored on the hard disk drive, the method comprising: reading one or more partition metadata parameter values from the cluster-based backup image (Jenevein, col. 21, lines 48-67); writing one or more of the partition metadata parameter values to the partition metadata data structure (Jenevein, col. 21, lines 60-65); and for one or more clusters in the cluster-based backup image: reading a cluster from the cluster-based backup image; writing the cluster to the partition to be restored (Jenevein, col. 22, lines 16-21); and updating the volume bitmap to include the cluster written to the partition to be restored as part of the restored partition (Jenevein, col. 21, lines 2-6).

Jenevein discloses a volume bitmap and partition metadata (Jenevein, col. 20, line 60 through col. 21, line 6 and col. 21, lines 48-67), but fails to disclose clearing a volume bitmap associated with the partition to be restored, and clearing a partition metadata data structure associated with the partition to be restored.

Colligan discloses that the partition being restored is formatted to avoid possible corruption of operating system data (Colligan, col. 11, lines 9-16).

It would have been obvious to include the formatting of Colligan in the invention of Jenevein.

This would have been obvious because Jenevein discloses a desire to avoid corruption during restoration (Jenevein, col. 15, lines 35-37). This would have included a desire to avoid corruption of the system structures such as the bitmap and the partition metadata. Colligan discloses formatting the partition to clear any possible sources of data corruption (Colligan, col. 11, lines 9-16). The obvious combination of this would result in Jenevein being more resistant to corruption during restoration by clearing any possible system sources, which would obviously include the bitmap data and partition metadata.

As per claim 34, Jenevein and Colligan further disclose the method of claim 32, where the cluster-based backup image is stored in the same partition as the partition to be restored (Jenevein, col. 5, lines 5-8).

As per claim 35, Jenevein and Colligan further disclose the method of claim 32, where the cluster-based backup image is stored in a different partition than the partition to be restored (Jenevein, col. 16, lines 40-43).

As per claim 36, Jenevein and Colligan further disclose the method of claim 32, where the cluster-based backup image includes one or more of, an NTFS file system, and a FAT32 file system (Jenevein, col. 7, lines 45-59).

Jenevein in view of Colligan in further view of Recovery Solutions

Claims 33 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenevein in view of Colligan in further view of Recovery Solutions.

As per claim 33, Jenevein and Colligan disclose all the dependencies relating to claim 32, but fail to disclose the volume bitmap being accessed using a WinPE process..

Recovery Solutions discloses using WinPE processes to execute all steps in the creation of recovery images (Recovery Solutions, pages 5 and 7).

It would have been obvious to one skilled in the art at the time of the invention to use the WinPE processes of Recovery Solutions to execute the image creation methods of Jenevein.

This would have been obvious because, both Jenevein and Recovery Solutions disclose a desire to create a recovery image of a partition (Recovery Solutions, page 1, and Jenevein, col. 6, lines 44-46). Recovery Solutions provides a WinPE method for doing so that provide the added benefits of being faster and using more recent drivers (Recovery Solutions, page 4) than may be available with the MS-DOS deferring system of Jenevein (Jenevein, col. 7, lines 30-41).

As per claim 37, Jenevein discloses a computerized method for restoring a partition on a hard disk drive from a cluster-based backup image stored on the hard disk drive, the method comprising: reading one or more partition metadata parameter values from the cluster-based backup image (Jenevein, col. 21, lines 48-67); writing one or more of the partition metadata parameter values to the partition metadata data structure (Jenevein, col. 21, lines 60-65); and for one or more clusters in the cluster-based backup image: reading a cluster from the cluster-based backup image; writing the cluster to the partition to be restored (Jenevein, col. 22, lines 16-21); and updating the volume bitmap to include the cluster written to the partition to be restored as part of the restored partition (Jenevein, col. 21, lines 2-6).

Jenevein discloses a volume bitmap and partition metadata (Jenevein, col. 20, line 60 through col. 21, line 6 and col. 21, lines 48-67), but fails to disclose clearing a volume bitmap associated with the partition to be restored, and clearing a partition metadata data structure associated with the partition to be restored.

Colligan discloses that the partition being restored is formatted to avoid possible corruption of operating system data (Colligan, col. 11, lines 9-16).

It would have been obvious to include the formatting of Colligan in the invention of Jenevein.

This would have been obvious because Jenevein discloses a desire to avoid corruption during restoration (Jenevein, col. 15, lines 35-37). This would have included a desire to avoid corruption of the system structures such as the bitmap and the partition metadata. Colligan discloses formatting the partition to clear any possible sources of data corruption (Colligan, col. 11, lines 9-16). The obvious combination of this would result in Jenevein being more resistant to corruption during restoration by clearing any possible system sources, which would obviously include the bitmap data and partition metadata.

Jenevein and Colligan fail to disclose doing the clearing, reading, and writing using a WinPE process.

Recovery Solutions discloses using WinPE processes to execute all steps in the creation of recovery images (Recovery Solutions, pages 5 and 7).

It would have been obvious to one skilled in the art at the time of the invention to use the WinPE processes of Recovery Solutions to execute the image creation methods of Jenevein.

This would have been obvious because, both Jenevein and Recovery Solutions disclose a desire to create a recovery image of a partition (Recovery Solutions, page 1, and Jenevein, col. 6, lines 44-46). Recovery Solutions provides a WinPE method for doing so that provide the added benefits of being faster and using more recent drivers (Recovery Solutions, page 4) than may be available with the MS-DOS deferring system of Jenevein (Jenevein, col. 7, lines 30-41).

Milne in view of Jenevein

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Milne et al., United States Patent number 6, 711,660, filed June 22, 2001.

As per claim 45, Milne discloses in a computer system having a graphical user interface comprising a display and a selection device, a method of providing and selecting from a set of data entries on the display, the method comprising: retrieving a set of data entries, where a data entry represents one of, a image backup action and a image restore action; displaying the set of data entries on the display; receiving a data entry selection signal indicative of the selection device selecting a selected data entry; and in response to the data entry selection signal, initiating one of, a image backup operation, and a image restore operation associated with the selected data entry (Milne, col. 6, lines 1-14).

Milne fails to disclose that the backup and restore is cluster-based.

Jenevein discloses a cluster-based backup and restore (Jenevein, col. 6, lines 51-54).

It would have been obvious to one skilled in the art at the time of the invention to use cluster-based backup in the invention of Milne.

This would have been obvious because it is a well known technique for grouping data involved in imaging with established handling techniques (Jenevein, col. 6, lines 51-54).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is provided on form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua A. Lohn whose telephone number is (571) 272-3661. The examiner can normally be reached on M-F 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAL

SCOTT BADERMAN
SUPERVISORY PATENT EXAMINER